

INVENTORY TRACKING CASE STUDY

INDUSTRY:

Healthcare

COMPANY:

OrthoRehab, Inc.

CHALLENGES:

- Eliminate inefficient and error-prone inventory tracking
- Eliminate reliance on billing system to provide inventory information
- Track all assets wirelessly and in real-time
- Reduce annual financial losses based on non-reported assets
- Reduce administrative work in updating master database

RESULTS:

- Inventory-tracking paperwork greatly reduced
- Billing and inventory-tracking processes separated for greater efficiency
- More accurate inventory through field workers' use of BlackBerry handhelds to scan transferred assets
- Annual financial loss of non-reported assets significantly diminished
- Administrative processes simplified



Keeping a close eye on inventory with a wireless tracking solution

Providing orthopedic support, nationwide.

OrthoRehab, Inc. is the nation's leading supplier of rehabilitative goods and services to postoperative limb surgery patients. Based in Tempe, Arizona, OrthoRehab employs more than 200 people and has offices in major locations across the country.

The products OrthoRehab provides center around an advanced technology called Continuous Passive Motion (CPM). This technology allows postoperative patients to exercise limbs and joints with minimal associated stress, thereby healing more quickly with less physical therapy than would otherwise be required. The technology functions through the use of devices—supplied by OrthoRehab directly to patients—that fit onto the limb or joint.

Field workers called Patient Service Representatives (PSRs) are sent to patients' homes as well as hospitals and clinics in order to deliver these CPM units and instruct patients on how to use them. This requires constant mobility—and the frequent transfer of OrthoRehab's inventory from one location to another. With almost 17,000 pieces of equipment in the field at any given time, inventory shifts must be recorded diligently and without error.

An inefficient process leads to major losses.

OrthoRehab had always tracked their inventory through a paper-based process that required PSRs to manually fill out a form every time a CPM unit was transferred to a patient, hospital or clinic. The form then had to be faxed to OrthoRehab's regional or corporate centers, where an administrative worker would enter the information into the company's master database and transfer it to the billing department.

Their inventory includes two types of goods: serialized (recoverable CPM units stamped with serial numbers) and non-serialized (non-recoverable goods sold to patients, such as bandages and other disposable items). Specific inventory items are assigned to different regional offices, and ideally match up with the number on file at corporate headquarters. However, with the paper-based process, this wasn't always the case.

Brian Tower, Director of Information Technology at OrthoRehab, explained the problem with a typical scenario. "We might call up a regional office and say, 'You have 20 pieces of equipment,' and they'll say, 'No, we only have two.'"

This is because our paperwork typically lagged behind our service and support by anywhere from two weeks to a month." Another example of ineffective inventory tracking occurred when a PSR brought a device to a patient in a hospital bed, and the patient then took the device home. That transfer might never be recorded using the original tracking process, and the device would still show up as being at the hospital.

As with any paper-based process, human error compromised the system's accuracy and reliability. Mistakes resulted from faxes not transmitting and forms containing inaccurate and sometimes illegible information. If serial numbers were recorded incorrectly, it became an additional issue for the asset department to handle. These extra steps held up the billing process, and OrthoRehab found that they were actually relying on billing to officially track movement of inventory.



OrthoRehab's inventory loss has been significantly reduced as a result of the wireless solution.

The lack of precision resulting from the paper-based process added up to big losses for OrthoRehab. Every time a physical inventory was performed, an average of 2,000 to 3,000 serialized devices were "missing." Even if those devices showed up when the next inventory was done, there would be a new set of non-reported devices. In addition, the company was experiencing substantial financial

losses in non-serialized assets. It was obvious to OrthoRehab that this inefficient process was costing them too much time and money.

Seeking an alternative solution.

It didn't take long for OrthoRehab to pinpoint the kind of solution they were looking for: they wanted to track their inventory wirelessly, preferably in real-time, in order to obtain an overall snapshot of field status at any given time. "We just wanted to come up with a way for [inventory] to be recorded electronically every time [it] was touched," said Tower.

It was also important to the company that the tracking system work independently of their billing system. "I was trying to separate inventory from billing. Because the two had been joined for so long, it was having a negative effect on our revenue," Tower explained.

OrthoRehab began looking into the available solutions, and made their first foray into electronic inventory tracking with another mobility solutions provider in 2001. They performed a limited rollout of a device that tracked inventory using combined PDA and scanner functionalities. However, the device's battery life was less than one day, and it still had to be synced at the end of the day to update inventory records, falling short of OrthoRehab's goal of real-time tracking. In addition, at over \$1,500 per device, this particular provider's solution never proved to be cost-effective.

Finding success with AT&T Wireless.

After OrthoRehab's disappointment in their first attempt at electronic inventory tracking, they put the initiative on hold for a few months. Then in 2003, a better solution presented itself in the form of a meeting with a local AT&T Wireless Account Representative. The sales representative initiated a discussion about OrthoRehab's wireless data needs and Tower mentioned the project that had been set aside.



CPM units like this are now easily scanned and tracked with the wireless solution.

The AT&T Wireless representative recognized a perfect opportunity to solve OrthoRehab's inventory tracking problems and introduced the possibility of integrating barcode solutions with BlackBerry handhelds.

To explore this idea, the AT&T Wireless representative brought in additional providers who could help develop a complete solution: RIM (Research In Motion), manufacturer of BlackBerry handhelds, and Flowfinity, a developer of BlackBerry applications. Tower described how all of the parties involved worked together to bring about the wireless solution for OrthoRehab. "We used AT&T Wireless as the catalyst, and Flowfinity as the [application] provider, and we put the two together to create one solution."

In fact, once Tower saw how smoothly everything was coming together, he didn't want to waste time looking into other providers. "It didn't really seem like there was a necessity to go out and look for another solution," he said. "I got a lot of green lights with [the AT&T Wireless solution]."

Working together, OrthoRehab, AT&T Wireless and Flowfinity were finally able to make the wireless real-time inventory tracking system a reality, with minimal time spent on system



integration. In total, the new solution took a single developer just one month to integrate with the company's existing system.

Tower and his team used Flowfinity Forms, a data collection application, to develop electronic versions of the original paper forms. This conversion required no custom programming and was completed within just 72 hours of installing the software.

Once the solution was complete, OrthoRehab equipped each field worker—including PSRs and sales representatives—with a laser scanner tethered to a BlackBerry handheld. "BlackBerry has become the norm for our organization now," said Tower. In fact, over 80 percent of OrthoRehab's staff now uses BlackBerries on a regular basis.

As with any new technology, there was some resistance among the field workers when the new process was introduced. However, any opposition to the solution quickly turned into excitement once its benefits became apparent. "When the field workers realized that so much of what they do on a day-to-day basis could be rolled up into this little device, and how much more efficient they could be," said Tower, "then a few heads started to turn."

Measurable benefits from a superior process.

With the new wireless solution, PSRs now scan CPM units right at the patient site, and fill out simple forms on their BlackBerry handhelds. They then submit the completed forms directly to corporate headquarters, where the information is automatically entered into the billing system. Now, equipment is always correctly linked to the corresponding patient.

The benefits of the wireless solution were immediately recognizable. In general, the mobile workforce can work

more intelligently and effectively. "The second that we sent [the handhelds] out there, it really increased everyone's effectiveness," said Tower. OrthoRehab can now see where their inventory is at a glance and which patients have been set up with CPM units. Additionally, improved inventory tracking has increased the accountability of individual regional offices, as responsibility for specific items can now be more easily assigned.

On the administrative side, patient information can be updated more quickly, as there is less data entry necessary at the back-office. And as a result of the wireless solution, invoice processing is significantly faster.

With the new wireless solution from AT&T Wireless, Patient Service Representatives now scan CPM units right at the patient site.

The solution has even provided some unexpected benefits. Field workers have been more productive as a result of email access on their BlackBerries. "Before, we pretty much lived and died by cell phones and pagers," said Tower. "If people had to check their email, they would run into their local offices and connect via some type of remote access."

Email has even helped PSRs locate patients' houses more easily. Previously a PSR would have to call an office, have the supervisor find directions online, print them out, and fax them to the PSR. The PSR would then have to pick up the fax and finally, drive to the patient's house. Now, PSRs can go online to get directions right on their handhelds. "Just that kind of thing alone is probably knocking off two hours in the typical PSR's day," Tower said.

In addition to email access, the reduction in paperwork has allowed OrthoRehab



PSRs now use BlackBerry handhelds to scan CPM units, fill out electronic forms and even find patients' homes.

sales representatives and PSRs to make better use of their time. "They don't have to spend so much time standing in front of a fax machine," Tower explained.

Perhaps the most important results of the wireless solution have been cost-related, as it has had an enormously positive financial impact. Now that OrthoRehab can track their inventory better, they can also order it in a smarter fashion. "If we can obtain goods at a lower cost and get inventory to somebody more quickly, then the bottom-line effect is felt by everyone," said Tower.

OrthoRehab is also pleased with how quickly the solution has paid for itself in inventory loss reduction, yielding an annual savings of approximately \$250,000. "Compared to what we were losing," said Tower, "it's practically a no-brainer as far as how quick we're going to pick up our investment. The solution was both a necessity and an investment well worth making."

Positive reactions company-wide.

OrthoRehab considers AT&T Wireless a vital partner in making the wireless solution happen, and was impressed by their performance throughout the process. "The relationship with

AT&T Wireless is key because so much of the hardware and service is centered around it," said Tower.

The company also saw how integral AT&T Wireless was in bringing all of the necessary parties together. "From the beginning, AT&T Wireless were the ones who brought everyone to the table," Tower said. "They set up the conference calls and the meetings, and they made sure that they were followed through on."

"When it comes to service and support, [AT&T Wireless] is our anchor."

Brian Tower
Director of Information Technology

During the nationwide deployment, Tower immediately turned to AT&T Wireless for help with any problems or issues. "When it comes to service and support, they are our anchor," he said.

The company also feels that they are able to better service their customers as a result of the wireless solution. While customers expect their issues to be resolved, Tower believes it's the way they are resolved that really defines a company. "It's really how well you react to a situation that [sets] you above par with your clients and who you want to attract in the future," he said. "I think this solution is what's allowing us to do that."

OrthoRehab believes that the solution far exceeded their initial expectations. They initially sought a way to simply cut down

on inventory loss. Since then, they've seen the solution's positive benefits increase exponentially. "It has been a success on so many levels," said Tower. "It really has increased our field [workers'] perspective on what we're trying to do in the 21st century."

Looking towards the future.

Everyone at OrthoRehab is excited about the opportunities that have opened up as a result of the wireless solution. They now have a list of potential new applications. The next big project, for example, is to transfer their patient agreement form from paper to wireless. Tower and his development team are now working on recreating this form for the BlackBerry, which will eventually allow them to easily transfer the information into their database.

There are many other forms that can be translated electronically as well, including insurance information, co-pays, and even physician prescriptions. Of course, Tower imagines a day when OrthoRehab could be completely

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paperless. "Whatever we can consolidate and get into BlackBerry form is going to be a win for us," he said.



OrthoRehab's products allow postoperative patients to exercise limbs and joints with minimal stress.

When OrthoRehab considers the long-term effects of the wireless solution, they feel it will be nothing but positive for their bottom line. "The solution can improve both the cash flow and financial stability of our company," said Tower.

OrthoRehab is eager to pursue all of the wireless opportunities that AT&T Wireless helped make possible—it's almost hard to believe that it all started with a simple desire to improve their inventory tracking system. "We have just started down this road and there are so many opportunities that lie ahead of us," Tower said. "While it's a case study for inventory tracking today, it could be a case study for the paperless office via BlackBerry tomorrow. That's what we're excited about."

For more information, contact your AT&T Wireless Account Representative or visit attwireless.com.

IMPORTANT INFORMATION

OrthoRehab's results with the AT&T Wireless BlackBerry Enterprise solution and the data collection application from Flowfinity are no guarantee of similar results for your company. AT&T Wireless BlackBerry Enterprise solution requires a qualified business agreement, a client license associated with a company implemented eligible BlackBerry Enterprise Server, and, with respect to each end user, a compatible BlackBerry Wireless Handheld™ device with activation on a BlackBerry Access Plan. Service is subject to materials in the device box, rate plan and other related materials. See attwireless.com/blackberry for details. Additional hardware, software, subscription, and/or special network connection may be required for specific third party data collection or other inventory tracking solutions.

Availability, timeliness, speed and reliability of service are subject to radio transmission limitations caused by system capacity, system repairs and modification, your equipment, terrain, signal strength, weather and other conditions. Due to coverage limitations and other factors, information may not be accessible at all times. Other restrictions, minimum computer requirements and terms and conditions may apply. For more information, contact your AT&T Wireless Account Representative.

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